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Thomas takes the reins at Eastern Kentucky PRIDE

By Cindy Schafer
Office of the Secretary

Being named the leader of a successful organization is no small task, but Richard Thomas is ready for the challenge. Thomas was selected as the new executive director of Eastern Kentucky PRIDE (Personal Responsibility in a Desirable Environment) in August.

Thomas is no stranger to PRIDE. As a former principal assistant in the Natural Resources and Environmental Protection Cabinet (NREPC), he served on the PRIDE executive committee and coordinated the cabinet's Open Dump Initiative to rid the Commonwealth's landscape of illegal dumps.

"Richard has been a leader in PRIDE since it began," said U.S. Rep. Harold "Hal" Rogers, R-Somerset. "I am confident that he will continue PRIDE's success and lead the organization to even greater heights."

"I welcome the challenge Rep. Rogers has given me," said Thomas. "I plan to continue moving the organization along the path of success."

Eastern Kentucky PRIDE was created in 1997 by Rogers and the late General James Bickford, former secretary of the NREPC, and serves 38 southern and eastern Kentucky counties by assisting them in the cleanup of community rivers and streams, illegal dumps and promoting environmental awareness.



Richard Thomas (left) and U.S. Rep. Hal Rogers at the 2003 Envi Awards. Photo provided by Eastern Kentucky PRIDE

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what's inside

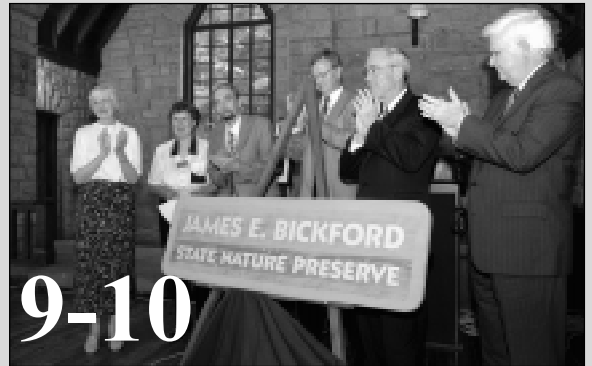
**Land
Air & Water**

**Fall 2003
Volume 14 Number 4**

Features

James E. Bickford preserve dedicated

Forty-fifth nature preserve named
for public servant passionate
about Pine Mountain.



9-10



5-6

Get your feet wet 5-6

Discover the benefits of
wetlands in the Daniel
Boone National Forest.

HB 174 is healing Kentucky's landscape 13

The new law is generat-
ing money to fix solid
waste problems.



13

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Contents

Thomas takes the reins at Eastern Kentucky PRIDE	Inside Cover
Glass recycling is making a comeback	1
City managers learn energy management	2
Wildland urban interface	3
McCreary gets results with firewise council	4
\$1.4 million grant will educate Kentuckians about water pollution	7
Mammoth Cave National Park makes the switch to E-85 fueled vehicles	8
Outreach program soars "into the air"	11
Workshops go statewide to help communities with runoff pollution	14
The business of e-business grows	15
State, DOE sign cleanup agreement	16
The spirit of Gato del Sol "rayces" on	17
Agency tours slurry spill site	18
Teachers "energized" by workshop	19
Conferences & Awards	20
Kentucky River banks receive a spring cleaning	Back Cover

On the Cover

This beautiful fall photograph was taken in Nelson
County by Thomas G. Barnes, University of Kentucky,
Department of Forestry.



Glass recycling is making a comeback

By Matt Hackathorn
Division of Waste Management

A few Kentucky communities have gotten into the swing of PGA marketing, and we're not talking about golf commercials featuring Tiger Woods.

Pulverized glass aggregate, or PGA, is a clever alternative for effectively recycling glass. Since glass is an inert material derived from sand, cities and counties can incorporate PGA as fill in any number of projects, such as road construction, culvert emplacement and septic applications.

The glass recovery market has deteriorated in the last five years, due mainly to manufacturers' steady migration to packaging made from plastic and aluminum, coupled with the high cost associated with recycling glass.

The national plummet of the glass market forced several Kentucky communities to stop offering recycling services to citizens. Most community recycling operations struggle to break even, so handling a virtually worthless (not to mention heavy and bulky) commodity naturally creates a drain on resources.

This unfortunate economic trend has resulted in the majority of container glass

generated in Kentucky going into landfills. In many instances, glass being returned to recycling operations piles up because it's cheaper for the manufacturing industry to use raw materials.

Tom Heil, a veteran recycling specialist who runs the Kentucky Recycling and Marketing Assistance (KRMA) program for the Department for Environmental Protection, worked with staff from the Department of Highways in the Transportation Cabinet to obtain approval for PGA use in city and county road projects. Last April the Transportation Cabinet approved experimental field testing of PGA in local roadbeds, culvert bases and other engineering plans.

Henderson, Rowan and Union

counties have completed PGA-related projects, and other counties have started to seek funding support for pulverizing equipment, which runs somewhere in the neighborhood of \$10,000.

"Until recently, the KRMA staff was advising Kentucky recyclers to avoid glass altogether because it just couldn't compete with plastic and aluminum as a recyclable commodity," said Heil. "Now, any local community has a cheap and very beneficial alternative for effectively reusing every single bit of glass they can take in, provided the recycling program can convince local government to help cover the start-up expense."

Continued on Page 16

LEFT: A Henderson County road department employee used a hand compactor to level a four-inch-thick layer of PGA in a five-foot-wide trench as part of a road-widening project in June. Henderson was the first county in Kentucky to use pulverized glass aggregate as fill in a road project. Photo by Matt Hackathorn

UPPER RIGHT: The Morehead-Rowan County-MSU Community Recycling Center mixed glass aggregate with wet concrete to create this recycling pad on Morehead State University's campus. The inset provides an up-close look at the decorative effect the different colors of glass creates. Photo by April Haight, Morehead State University

LOWER RIGHT: Container glass can be pulverized into different grades of aggregate. The glass on the left has rounded edges and poses no danger to construction workers. The glass on the right was processed with a much less expensive pulverizing machine, resulting in small, sharp shards. Either grade is suitable as fill in road construction and culvert projects.

Photo by Matt Hackathorn

City managers learn energy management

By Julie Smither
Division of Energy



Implementing an ESPC project includes installation of energy-efficient lighting.
Photo provided by the National Renewable Energy Laboratory

What is an Energy Management Program? Kentucky Pollution Prevention Center director Cam Metcalf explained that the goal of an Energy Management Program is to develop and implement a comprehensive approach to energy efficiency. This includes reducing usage of electricity, natural gas, propane, heating fuel, water, sewage and other utilities through upgrades of facilities and purchases of energy-efficient equipment. It also includes occupant education to ensure their cooperation in implementing energy-saving procedures.

The first step, Metcalf explained, is to look at a building's usage of energy—if it's not measured, you can't manage it. Figure out the consumption per square foot, compare that to other buildings in the same geographical location, then focus on those buildings that are wasting energy, prioritizing the facility upgrades. These will include improvements to heating and cooling systems, lighting, insulation and digital controls, as well as equipment such

as computers, printers, copiers and fax machines.

Metcalf said that a well-run Energy Management Program could be self-funding solely through the savings in utility costs.

How do you pay for these upgrades? Neil Morgan, property manager for the federal government's General Services Administration office in Louisville, described the benefits of purchasing energy-efficient products and equipment. He gave examples of how his office had performed life cycle cost analyses on equipment and had purchased ENERGY STAR-labeled items wherever possible.

The Division of Energy's Eddie Riddle discussed an energy savings performance contract (ESPC) at the workshop. This is a method of funding upgrades through utility savings generated by improving energy efficiency.

Mike Mahoney with Custom Energy, a private energy services company, explained how an energy services company (ESCO) would design and

Natural gas prices are rising. Budgets for local governments are feeling the pinch of increased heating and cooling costs—and it's going to get worse before it gets better.

Through a grant received from the U.S. Department of Energy, a workshop was conducted in June by the Kentucky Division of Energy with the Kentucky Pollution Prevention Center to help Lexington Fayette Urban County Government (LFUCG) learn how to reduce its \$5-7 million utility bill. More than 40 LFUCG managers attended the workshop and learned the basic whys, whats and hows of an Energy Management Program.

Why have an Energy Management Program? In addition to the obvious cost savings, improvements in energy efficiency save on building maintenance and increase building value. These improvements create better working environments, leading to improved employee performance and satisfaction, as well as reduced absenteeism. Another positive outcome is the community good will from the environmental stewardship demonstrated by these efforts.

Continued on Page 12



Four of the 10 buildings on Western Kentucky University's campus that were upgraded in the ESPC project. University photo

Wildland urban interface

Where there's smoke and fire there's danger to your home

By Gwen Holt
Division of Forestry

A forest fire can destroy your home and property in a matter of minutes. Acres of land can be consumed in the time that it takes to dial 911, and your home could be in the direct path of a blazing inferno. Are you doing everything you can to prevent a wildfire from spreading to your home?

The National Wildland Urban Interface Protection Program defines wildland urban interface as “an area where development and wildland fuels meet at a well-defined boundary.” Basically, it means if you live in or near forestland you live in the interface.

Why should you be concerned about living in the interface? The many benefits of choosing to live in such a desirable location are compromised by the increased risk of wildland fire to your home. Most homeowners in interface areas don't think about the dangers wildfires create until they occur, but the time to deal with wildland fires is before they begin.

Individual landowners are not the only ones impacted when a fire occurs in the wildland urban interface—the entire community is impacted. Local firefighting and water resources are strained, valuable timber is lost and an increase in respiratory illness occurs due to heavy smoke. Tourism may also be affected, which could lead to loss of employment if tourists won't visit the smoke-filled area.

Though many associate wildland fires to the western United States, the potential for devastating wildfires exists in Kentucky. “In 2000, Kentucky experienced one of the worst fire seasons in many years,” said Leah MacSwords, director of the Kentucky Division of Forestry. More than 178,000 acres burned, and



thousands of homes were threatened. In McCreary County, two homes were lost and several others were damaged. “The tireless efforts of local firefighters and other firefighting resources luckily saved many homes, but it's a matter of time before there is a serious increase in the number of homes, and possibly lives, lost due to wildland fires in interface areas,” she said.

How do you protect your home and community from wildfires? There are several simple things you can do to decrease the wildland fire risk to your property—don't stack firewood next to your house, and keep tree limbs trimmed away from the roof.

To decrease the risk to your community you can establish a firewise council to evaluate fire risks community wide, and then take steps to reduce them.

Continued on next page



McCreary gets results with firewise council

Following the devastating wildfires of 2000 in McCreary County, a firewise council was established (see *McCreary gets results with firewise council* on this page). The council applied for and received federal grant funds to reduce fire risks in its community. Local volunteer fire departments work with individual homeowners to remove fire hazards, and in return the council donates the grant funding to the fire departments to purchase much-needed equipment.

The McCreary County Firewise Council is currently the only council in Kentucky. It has been very successful and has substantially decreased the wildland fire risk to the local community.

Don't wait until your home has been destroyed to take action to reduce fire risks. To learn more about protecting your home visit the firewise Web site at www.firewise.org. You can also learn how to establish a firewise council in your community by attending a free Firewise Communities Workshop.

The Kentucky Division of Conservation, along with the Kentucky Division of Forestry, University of Kentucky Cooperative Extension Service and USDA Forest Service are currently conducting Firewise Communities Workshops. For more information contact the Kentucky Division of Conservation at (502) 564-3080 or visit their Web site at <http://www.conservation.ky.gov/firewise> [brochure.pdf](#). Workshops are planned for late summer and early fall of 2003 and January and February 2004.



OPPOSITE PAGE: *Firefighters work to rid property of leaves and debris near a homeowner's dog pen. Fire and smoke are seen in the background.* Division of Forestry photos

THIS PAGE RIGHT: *Firewise instructor E.J. Bunzendahl of the U.S. Forest Service provides information about protecting communities from wildfires to members of the McCreary County Firewise Council and citizens from Knox and Madison counties.*

Photo by Gwen Holt, Division of Forestry

Lola Lyle
Division of Conservation

Three years ago, the citizens of McCreary County learned firsthand the tremendous impact arson and wildfires can have on a community. In 2000 the county, which is located entirely within the Daniel Boone National Forest, saw a severe build up of forest fuels from an ice storm and a southern pine beetle epidemic, as well as an increase in wildland arson. Consequently, forest fires destroyed two area homes and taught the community the difficult lesson that arson is everyone's problem.

The loss of the homes impacted the entire county and helped to encourage the community to take action. A firewise council was established that included state, federal and local county government representatives, as well as local fire departments, local business owners and private citizens.

The McCreary County Firewise Council established the following goals:

- reduce the fire hazard in McCreary County,
- prevent wildfires through public education,
- teach citizens about defensible space, and
- educate citizens about the overall fire potential that exists in McCreary County.

McCreary County saw many improvements as the result of its community outreach effort. The number of fires decreased in 2001, and the fires were not near homes. The citizens learned that overcoming apathy is possible and that arson is a community problem. The firewise council also taught the public that partnerships are the key to success, and the National Fire Plan is available to help communities establish firewise programs. As a result, in 2002 there were only 15 wildland fires countywide.

Recognizing McCreary County's success rate in the reduction of wildland fires, the Kentucky Division of Conservation partnered with the Division of Forestry, USDA Forest Service and University of Kentucky's Cooperative Extension Service to hold Firewise Community Workshops throughout the fire-prone areas of eastern Kentucky. The objective of the workshop series is for individuals and groups to learn how to use the collaborative firewise community planning process and effectively transfer the knowledge and techniques to their own communities, regardless of size and structure.

The Division of Conservation will be working with its strong network of conservation districts to get local officials and citizens involved in the firewise planning process and to develop local firewise councils in their communities. "Conservation districts in other parts of the state can do what McCreary County did—get concerned citizens

together, whether it be the county judge or other community leaders, that can help," said Hurstle Smith, district supervisor for the McCreary County Conservation District. "Each county needs at least ten interested people together, and they need to try to get members of the community to attend meetings," he said. Smith also believes that educating the public is an important way to increase public involvement in firewise councils.



History in the wild

Wetlands reflect Kentucky's forgotten landscape

By Kerry Holt and Cindy Schafer
Office of the Secretary



Bring together one part clay or silty soil, one part water and two parts patience. In time, and with the right environmental ingredients, this recipe will yield the perfect home for a variety of wildlife, including frogs, ducks, geese and a large host of salamanders and other aquatic animals.

This perfect home is often referred to as a vernal pond, or wetland. Once naturally occurring, wetlands were a common feature throughout Kentucky's landscape. Historically, Mother Nature produced these areas by floods, earthquakes, fires or chemical reactions with the soil.

In the early 1800s a farmer found that by using drainage tiles to dry up wetlands on his property, he was able to produce better crops. The practice caught on across the country causing wetlands to vanish, and along with it an abundance of wildlife and plant species.

However, thanks to the efforts of environmentalists like Tom Biebighauser, wetlands are making a comeback. Biebighauser, a wildlife biologist with the U.S. Forest Service in Morehead, has made it a goal to restore wetlands in and around eastern Kentucky.

According to Biebighauser, wetlands are the most productive ecosystems in the country. They provide nutrient-filled water that attracts many animal species. Wetlands also provide a protective habitat and supply an abundant food source for ducks and white-tailed deer. They serve as an essential means for flood control, by soaking up excess water during heavy rains, preventing flooding in streams and rivers.

Recently Biebighauser and members of the Shelton Environmental Education Coalition (SEEC) applied for grant money from Eastern Kentucky PRIDE to restore and enhance wetlands within the Daniel Boone National Forest.

Continued on next page

OPPOSITE PAGE: *Kerry Holt and Tom Biebighauser dip for lifeforms in a wetland.*

BELOW LEFT: *The fragrant waterlily (Nymphaea odorata) is one of the rarest plants found in the Daniel Boone National Forest.*

BELOW RIGHT: *The surface of this shallow marsh, or wetland, is covered with water shield (Brasenia schreberi). Photos by Cindy Schafer*



Eastern Kentucky PRIDE (Personal Responsibility in a Desirable Environment) helps communities clean up illegal dumps, eliminate straight pipes and promote environmental efforts. PRIDE selected the SEEC wetland restoration project to receive a \$50,000 community grant to restore at least eight seasonal (vernal) wetlands and 13 shallow marsh wetlands on public land in Menifee and Rowan counties. Along with additional contributions from other environmental groups, state organizations and nonprofit volunteers, more than \$100,000 will be used to begin construction of the wetland restoration projects in the Daniel Boone National Forest by July 2004.

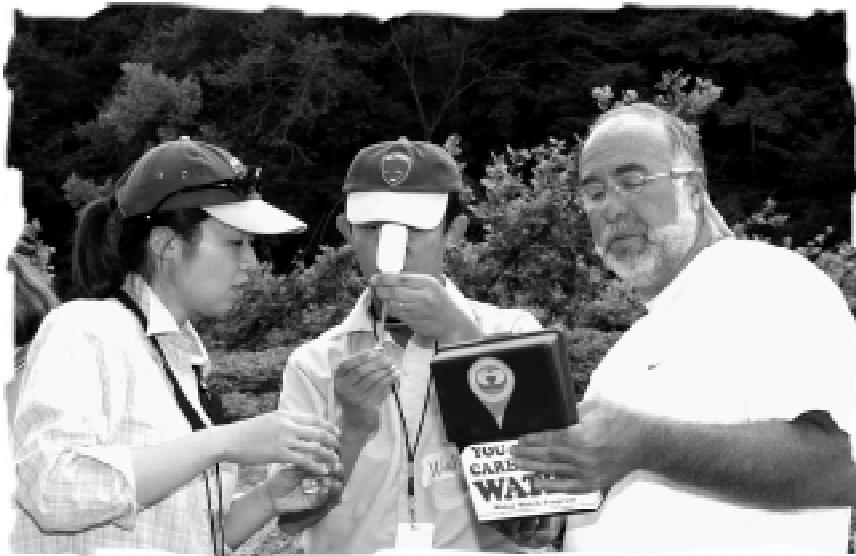
“\$100,000 is a major contribution towards wetland restoration. Not only are there benefits to wildlife and flood control, purifying runoff and keeping our streams clean, there are the tourism benefits,” said Biebighauser. “For many people, wetlands are great places to see wildlife, and there are people who drive a considerable distance to view birds and animals. Kentucky is one of the few places where tourists can see restored wetlands,” he said.

According to Biebighauser, one wetland can cost between \$2,500 to \$3,000 to restore. SEEC will use the grant money for contracting bulldozer, track hoe and bushhog work, as well as purchasing necessary seeds, straw and PVC drain pipe.

Only a small amount of the grant money will go towards purchasing plants for the newly established wetlands. Under the right conditions, seeds that have lain dormant for years will begin to germinate, alleviating the need to introduce new plants. Because of this, Biebighauser thinks it’s relatively easy for landowners to convert to wetlands. The key is to sit back, watch and let nature take its course. “Be patient when building your own vernal pond. In five years you could see up to 50 varieties of plant species begin to emerge,” Biebighauser says.

However Biebighauser has one word of warning—don’t expect your wetland to become the newest area fishing hole. Fish cannot survive in vernal ponds since they occasionally dry up during summer months. The absence of fish also allows amphibians and aquatic insects to reproduce.

Continued to Page 16



Dr. Terry Wilson (right), Western Kentucky University's Center for Math, Science and Environmental Education director, demonstrates water testing techniques to Momoko (left) and Wataru Suzuki (center) of the Ministry of the Environment, Japan during the River Institute Teacher Professional Development Program funded through a Section 319(h) grant. The Suzukis are learning about water management in the United States by participating in the Volunteer in Parks program sponsored by the National Park Service. Photo by Debra Spillman

\$1.4 million grant will educate Kentuckians about water pollution

By Rosetta Fackler
Division of Water

What's the number one environmental issue of concern in Kentucky? What's the major source of the problems that contribute to that concern?

"When we survey Kentuckians concerning their knowledge and attitudes about the environment, they identify water quality as their number one issue of concern. However, only a small minority can correctly identify the major source of water pollution," says Jane Eller, director of the Kentucky Environmental Education Council (KECC).

Nonpoint source pollution (NPS), also known as runoff pollution, is the greatest contributor to degraded water quality.

An ambitious project to educate every Kentuckian about the causes and effects of nonpoint source pollution has received a \$1.4 million grant, the largest NPS education grant ever awarded in the Environmental Protection Agency's Region 4.

The project, known as the Comprehensive Commonwealth Water Education Project, will attempt to educate every person in Kentucky about the causes and effects of nonpoint source pollution. It

will emphasize specific sources and remedies, especially practices individuals engage in that contribute to nonpoint source pollution.

Some of the activities being planned for the project include:

- A unified media message "tool box," including radio, TV and print materials that will raise awareness about nonpoint source water pollution that will be developed by Western Kentucky University's Journalism Department.
- A television documentary to be produced by Kentucky Educational Television (KET) that will include a virtual tour of a watershed. KET will also develop units concerning the importance of watersheds and how actions of individuals affect water quality to be used with the virtual tour and broadcast on KET's Star Channel.
- A professional development program for teachers to engage them in understanding the science of water and its inhabitants, and the correlation of land-use practices and personal actions that affect the health of aquatic ecosystems. This program will be prepared by teams from

environmental education programs at the University of Louisville, Northern Kentucky University, University of Kentucky, East Kentucky Science Center, Western Kentucky University and Murray State University.

- Units of study developed by the Kentucky Department of Fish and Wildlife Resources to complement its newly opened "Living Stream" exhibit.
- A statewide training program for local elected officials, a cooperative endeavor of the Kentucky Division of Water, Kentucky League of Cities, Kentucky Transportation Center and Kentucky Association of Counties.

The KECC will develop evaluations for measuring increased knowledge about nonpoint source pollution and the likelihood of changed behaviors to stop this type of pollution.

Recipients of the grant award are the University of Louisville Department of Geography and Geosciences in partnership with the KECC and 20 other organizations and agencies.

In accepting the award, Dr. Shirley Willinshanz, acting provost of the University of Louisville, said, "We firmly believe that education must extend beyond the boundaries of the classroom to all citizens. This project provides an excellent example of lifelong learning about one of Kentucky's most valuable natural resources."

For more information about nonpoint source education grants, go to http://www.water.ky.gov/NPS/nps_grants.htm.



MAMMOTH CAVE

National Park makes the switch to E-85 fueled vehicles

By Julie Smither
Division of Energy

Mammoth Cave holds the record for the longest cave system in the world totaling 336 miles. Now, it is going the extra mile by leading the way among national parks across the country in addressing air pollution by replacing traditional gasoline and diesel with cleaner fuels.

Mammoth Cave sits in a region of poor air quality. The discharge from power plants to the west, as well as air pollution from the Ohio River Valley and Nashville, are brought to the region by prevailing winds. Nearby Warren County is on the top-ten list of counties in Kentucky that don't meet the attainment standards for air quality set by the U.S. Environmental Protection Agency.

"There is a serious air pollution problem all over the southeastern United States," said Steve Kovar, facility manager of the park. "As a national park, we wanted to try something to correct it, or at least to do our part."

So in 1998, the park began switching its fossil-fuel vehicles to E-85, a blend of 15 percent gasoline and 85 percent ethanol, created by fermenting the sugar found in corn. Last spring, the remaining fossil-fuel light-duty vehicles switched to a 10 percent ethanol, 90 percent gasoline blend, which doesn't require any vehicle modification. The park installed an ethanol refueling station for these vehicles, thanks in part to the assistance of the Kentucky Corn Growers Association and the Kentucky Clean Fuels Coalition.

The park's heavy equipment switched from diesel to a biodiesel blend made from soybean oil or yellow grease, purchased from Valor Oil in nearby Bowling Green. Even the park's lawn tractors and its two

ferryboats operating on the Green River are powered by biodiesel.

The park wanted every facet involved, and Forever Resorts, the company that owns the park's hotel and buses, was a full participant. These buses transport 400,000 visitors

a year from a common parking area to the cave entrance. Forever Resorts obtained a grant to convert six of its buses to propane. The park obtained a grant to install propane refueling stations for those buses.

The park's vehicles represent the first 100 percent alternative-fuel fleet in Kentucky and the first national park in the country to install E-85 refueling on site.

This leadership in the alternative fuel arena contributed to the park recently being recognized as a "National Park of

Environmental Excellence" by the U.S. Department of the Interior. It was one of 20 parks to receive this designation out of the 385 parks in the national parks system.

"I knew Ron Switzer (park superintendent) was totally committed to this project the first time I met him," said Melissa Howell, executive director of the Kentucky Clean Fuels Coalition. She explained that a federal mandate requires all federal agencies to purchase alternative-fueled vehicles for their fleets, but it does not require the actual use of the alternative fuels in the vehicles. "When I asked if he planned to ever put ethanol fuel in,

Ron said, 'Why would we have the vehicles and not use the cleaner fuels?' Mammoth Cave has gone above and beyond in its proactive approach addressing air pollution."



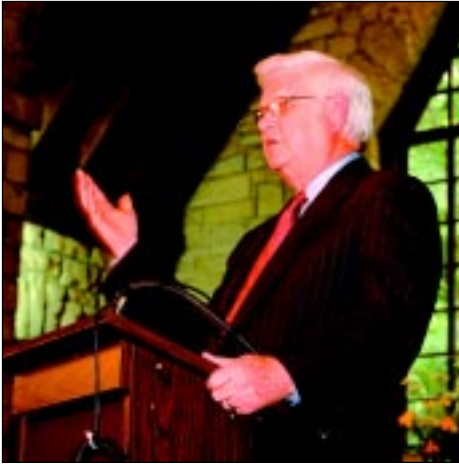
A Mammoth Cave employee refuels at a new ethanol fueling station.
National Park Service photo

For more information

Mammoth Cave National Park's
alternative-fuels project
contact Jim Carroll at (270) 758-2191
or e-mail jim_carroll@nps.gov.

Biodiesel or other energy issues,
see the Kentucky Division of Energy Web
site at www.energy.ky.gov or the Kentucky
Clean Fuels Coalition Web site at
www.fillupkentucky.com/index.html





State dedicates nature preserve to honor Bickford

By Cecilia Mitchell
Kentucky State Nature Preserves Commission

On July 30, 2003, the sun broke out between torrential downpours just in time for the dedication ceremony of the James E. Bickford State Nature Preserve (Bickford SNP). Located on the campus of the Pine Mountain Settlement School (PMSS) in Harlan County, Ky., this 348-acre newly dedicated state nature preserve was named in honor of the former secretary of the Natural Resources and Environmental Protection Cabinet (NREPC) who died in October 2002.

More than 200 individuals represent-

ing a multitude of federal, state and local government agencies and various organizations were present for the Kentucky State Nature Preserves Commission (KSNPC) quarterly meeting and dedication of the new preserve.

Conducted inside the beautiful and historic chapel at PMSS, the commission quickly dispensed with routine business in order to begin their consideration of the Bickford SNP. As part of the commission's dedication deliberation, informative narratives with slideshows

unique species endemic to the preserve and Sawmill Hollow Cave.

"I don't think I can overemphasize the importance of the Nature Preserves Commission and all the people that make things like this happen on behalf of the state of Kentucky," said NREPC Secretary Henry List.

Many special guests attended the dedication, including Gov. Paul Patton who spoke of his friend, James Bickford, who was raised in Harlan County. Patton said that when it comes to our land, "None of us own the land; we are only stewards of the land, at best, for just a lifetime. And as stewards of the land, not only as individuals, but as a society, we have an absolute responsibility to make sure that we leave this earth better than we found it."

Continued on next page

were provided by KSNPC staff members. Marc Evans, senior ecologist, discussed the ecological value of the entire Pine Mountain corridor, including PMSS. Ellis Laundermilk, invertebrate biologist, focused on the

UPPER LEFT: U.S. Rep. Hal Rogers, along with help from Secretary James Bickford, created the Eastern Kentucky PRIDE program.

Creative Services photo

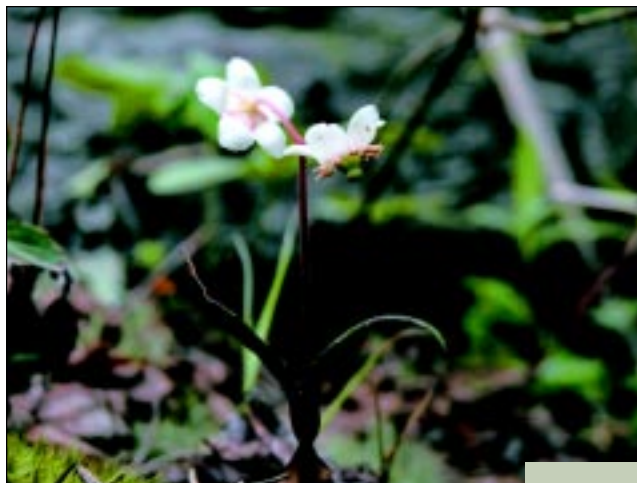
UPPER RIGHT: Pine Mountain Settlement School property.

Photo by Mark York, Office of the Secretary

LEFT: The unveiling of the James E. Bickford State Nature Preserve sign that will be placed near the trailhead of the preserve. *Creative Services photo*



These plant species are found on Pine Mountain: (right) Stripped wintergreen (Chimaphila maculata); (lower right) Rock harlequin (Corydalis sempervirens) and (below) Wintergreen (Gaultheria procumbens). Photographs by Nicholas Drozda, Kentucky State Nature Preserves Commission



For additional information

- For information on the James E. Bickford SNP or for information about the KSNPC, call (502) 573-2886 or visit www.kynaturepreserves.org.
- For information on PMSS, call (606) 558-3571 or 3542 or visit <http://www.pinemountainsettlementschool.com>.
- For information about ongoing activities to protect and preserve the Pine Mountain corridor, call the Kentucky Natural Lands Trust at (877) 367-5658 or visit <http://www.knlt.org>.
- For information about Harlan County, Ky., visit <http://www.harlancounty.com>.
- For information about the Pine Mountain Trail State Park, visit the Kentucky Department of Parks Web site at <http://www.kystateparks.com> or contact the Pine Mountain Trail Conference at <http://www.pinemountaintrail.com>.

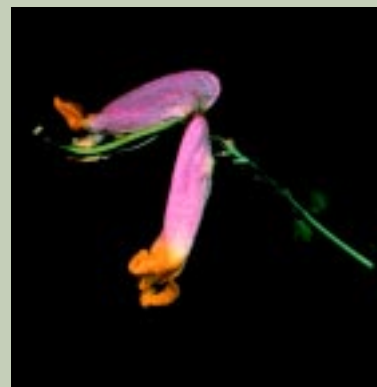
U.S. Rep. Harold "Hal" Rogers, R-Somerset, spoke of creating Eastern Kentucky PRIDE (Personal Responsibility In a Desirable Environment) with Bickford. "I can't thank you enough, all who have been a part in naming this beautiful preserved land in the name of James Bickford. He was a man who was, if there ever was one, an ideal public servant," he said.

Dr. James Greene III, with the Board of Trustees of PMSS, also spoke saying, "Many of the great issues that confront Kentucky and Appalachia today are tied intimately to the environment, such as flood control, water quality, solid waste disposal, logging and timber management, road building, mineral extraction and development of energy resources. The creation of rational environmental policies requires a citizenry which is educated and understands what is at stake." Greene also said that Pine Mountain Settlement School can play an important role in environmental education.

Shirley Bickford, widow of James Bickford, commented about her husband's devotion to improving Kentucky's environment and praised the work of the NREPC and KSNPC. "This preserve will speak of Jim's love for Harlan County, for Pine Mountain and of eastern Kentucky. It will serve as a reminder to my children and grandchildren, as well as to yours, of the importance of protecting Kentucky's environment," she said. "I believe if Jim could pick any mountain on which to rest it would be here on Pine Mountain, a special place he truly loved."

Continued on Page 12

More about the preserve



The James E. Bickford State Nature Preserve encompasses 348 acres on the north face of Pine Mountain in Harlan County. The preserve is located on the grounds of the historic Pine Mountain Settlement School, a highly regarded community and environmental education facility founded in 1913.

The preserve protects a high-quality mixed mesophytic forest, the typical natural community found on the north face of Pine Mountain. The preserve also protects Sawmill Hollow Cave, a small cave that developed in the limestone layer exposed on the north face of Pine Mountain. Additionally, the preserve supports a diverse invertebrate fauna, including two rare beetles and two species new to science. Six rare plant species, including fetterbush and golden saxifrage, are known to occur on the preserve. For access to the preserve, please contact the Pine Mountain Settlement School.

Outreach programs soar “into the air”

By Lillie Cox
Division for Air Quality

Public outreach is an important cabinet priority, especially for the Division for Air Quality. The division believes that citizens of the Commonwealth have a responsibility to protect the air they breathe, as well as all of Kentucky’s natural resources.

However, unless they are educated they may not know they can “do their share for cleaner air.”

That’s why the Division for Air Quality takes its message across the Commonwealth to citizens of all ages.

Here are just a few of the events that were held in 2003. For more information about any of these programs, contact the Kentucky Division for Air Quality at (502) 573-3382 or e-mail Lillie.Cox@mail.state.ky.us

Additional information can be found by visiting <http://www.air.ky.gov>.



LEFT: The division continues to educate the public about the new ozone standard. John Lyons and John Gowins explain the standard to elected officials in Louisville and surrounding counties.

UPPER RIGHT: Governor’s scholars check citizens’ vehicles for leaking gas caps during five weeks of studies and community involvement at Northern Kentucky University.

RIGHT: “Do your Share for Cleaner Air” materials are distributed to Clean Air-A-Thon participants in the northern Kentucky area.



LEFT: The division’s open burning exhibit helps educate Kentuckians at conferences and other events about the consequences of burning illegally. Handouts, such as “Does your garbage have you over a barrel?” are always popular and informative.

BELOW: Division-sponsored puppeteers from McLean County High School interact with students and the public as they perform “The Perils of Pollution” at schools and other special events. Photos provided by Lillie Cox



State dedicates nature preserve to honor Bickford

Continued from Page 10

Because of General Bickford's love for Pine Mountain, he signed a Lands Unsuitable for Mining Petition in 2001 that was instrumental in protecting more than 2,000 acres of the historic school's property from surface mining operations.

Nancy Adams, PMSS director, said that Bickford made the critical decision to protect PMSS from outside development, and added that Bickford "took a personal interest in the school and encouraged us to join others to work to improve the educational and economic opportunities for people in surrounding counties to restore their hopes for the future," she said.

The KSNPC commissioners voted unanimously in favor of dedicating the James E. Bickford SNP. Commission chair Clara Wheatley said, "the commission is honored to be dedicating land owned by the Pine Mountain Settlement School on the north face of Pine Mountain, which will provide the highest level of protection available under state law."

After the formal dedication, a 3- by 5-foot cedar sign was unveiled that will be erected at the trailhead entering the Bickford SNP.

After the meeting and dedication ceremony, everyone was invited to a reception hosted by PMSS and the KSNPC. The reception and refreshments took place in the scenic Laurel House, which serves as a dining hall and lodging facility at PMSS.

In addition to the reception, guided hikes of the Bickford SNP were offered by Ben Begley, PMSS naturalist, and Kyle Napier, KSNPC regional preserves manager. Unfortunately because another driving rain erupted, only a very few daring individuals actually hiked on the preserve that day. A handful of drenched folks were seen returning from their wet walk through the new preserve.

Information "stations" highlighting the programs and ongoing work of the KSNPC were featured in the reception room. On display were maps on state nature preserves and properties in the state's Natural Areas Registry program; the Natural Areas Inventory; the Rare Plant Recognition Act; the agency's database of rare, threatened and special concern species; examples of mussel shells; a sampling of technical publications available from KNSPC and the agency's timeline.

No one among the standing-room-only crowd attending the dedication of the James E. Bickford SNP seemed to mind the on again/off again rain on the lush and verdant Pine Mountain.

The dedication by KSNPC guaranteeing the perpetual preservation of this important natural area, as well as the homage of naming the preserve for former NREPC Secretary James E. Bickford, brought together many individuals representing diverse positions in Kentucky's environmental arena. On this day, both the environmental regulators and the regulated came together for a day of celebration.

The James E. Bickford SNP brings the number of dedicated state nature preserves to 45. As KSNPC Executive Director Donald S. Dott Jr. was overheard saying, "All Kentuckians—past, present and future—benefit by this action today."

City managers learn energy management

Continued from Page 2

implement the upgrades, understanding that the project is financed through utility savings. The ESCO then guarantees the energy savings.

Western Kentucky University's (WKU) John Osborne, associate vice president for Campus Services and Facilities, described the university's success with its ESPC. Two years ago, before legislation made the process easier, WKU completed an ESPC project on 10 of its buildings.

Implementation has been completed, and the university is now realizing its energy savings from the project — more than \$300,000 annually that will occur over the next 12 years. WKU was the first state government entity to accomplish an ESPC in Kentucky and is now considered a leader in performance contracting.

Where do we go from here?

Riddle advised the participants that once the commitment to complete an ESPC is made, an energy manager could be hired or a committee could be formed to implement and monitor the ESPC. He added that it is vital to have support from top management.

LFUCG chief administrative officer Michael Dohoney said after the workshop, "I am convinced that the workshop will prove beneficial in helping our organization become more energy efficient." He added, "We would readily recommend this type of workshop to other local governments."

For more information on an Energy Management Program, contact Eddie Riddle, Kentucky Division of Energy, at (800) 282-0868 or visit www.energy.ky.gov/doeespc.html.

Don't forget to attend the
Governor's Conference on the Environment
Oct. 27-28, 2003
at the Embassy Suites Lexington

For more information visit <http://environment.ky.gov/nrepc/governor/2003/2003conference.htm>

Tonic for an ailing environment

By Matt Hackathorn
Division of Waste Management



ABOVE: *Leachate escapes through the top of a vent in the leachate collection system pipe at the old Floyd County landfill, which is #1 on the priority list for cleanup.*

LEFT: *Dead vegetation due to leachate outbreaks.*

A new solid waste law designed to remedy such environmental infections as roadside litter, illegal dumps and improperly closed landfills is on course to help heal Kentucky's solid waste problems, according to a report issued by the Natural Resources and Environmental Protection Cabinet (NREPC) in July.

The cabinet's Division of Waste Management (DWM) issued a mandated summary to the Kentucky General Assembly Appropriations and Revenue Committee outlining the status of the new environmental remediation law, commonly referred to in solid waste circles as HB 174. The 2002 General Assembly enacted the measure to generate revenue for growing solid waste concerns across the Commonwealth. The law, which took effect Jan. 1, 2003, draws funding from three different sources.

According to the implementation report, since September 2002 the DWM has sent more than \$4.9 million coursing through Kentucky communities to battle the litterbug. Counties and cities have already received two "boosters shots" to their operating budgets in the form of litter abatement grants distributed by DWM.



Erosion has caused this gully to form in the landfill cap. Photos provided by Tony Cooley, Department for Environmental Protection

A \$5 million reallocation of funds from the Transportation Cabinet's road fund and highway construction contingency fund into the NREPC's Kentucky Pride Fund provides grant money to counties for litter cleanup. "The amount of grant funding cities and counties receive is

calculated based on population and road mileage as prescribed in the statute," said Resource Conservation and Local Assistance (RCLA) Branch Manager Sara Evans, whose branch is responsible for calculating the amount going to each county and city. "We have agreements with 117 out of 120 counties, as well as 235 cities across the state to conduct litter cleanups during calendar year 2003."

Since the environmental remediation statute stipulates that the NREPC receive two increments per year from the road contingency fund (\$2.5 million in September and \$2.5 million in April), counties and cities also receive two increments—in the fall and spring. Counties must have an approved solid waste management plan to be eligible for monetary support for litter activities.

A second "green" source for environmental cleanup comes from a \$1.75 per ton environmental remediation fee, or "tipping fee," assessed on waste generated in Kentucky and disposed at municipal solid waste disposal facilities. Revenue generated by the fee is collected quarterly and placed in the Kentucky Pride Fund to

Continued to Page 19

Workshops go statewide to help communities with runoff pollution

By Rosetta Facker
Division of Water

For people who had been wondering how to apply for a 319(h) grant to help stop runoff pollution, the staff of the Kentucky Nonpoint Source Implementation Program went to various locations in the state to answer questions about projects, impaired streams and whom to call for help with application preparation. Grant guidance teams visited several locations statewide from August through October.

This is the first year the team has conducted a recruitment program from the field. Nonpoint Source Program staff has used the workshops to attract new project partners and to assist existing partners in developing projects that will show measurable improvements in water quality. The goal of the workshops was to recruit partners who can achieve results like those realized in the lower Rock Creek Watershed.

The Rock Creek Task Force, formed in order to restore the lower Rock Creek Watershed, includes 12 state and federal agencies and conservation organizations. Total funding for the project was \$970,000 from a diverse partnership that included funds from a Clean Water Action Plan, Nonpoint Source Section 319(h) Grant, Appalachian Clean Streams Initiative, Eastern Kentucky PRIDE, Abandoned Mine Land Program and the U.S. Geological Survey.

Restoration of the stream is being achieved through reducing sediment and acidity entering Rock Creek and, where coal processing refuse dumps are located, returning the land to a vegetative state compatible with the surrounding area. The



Before and after photos of the Rock Creek Watershed area illustrate restoration of the land from a coal processing refuse wasteland to a lush revegetative area with improving fish populations. Photos provided by the Division of Water

project involves removing the coal refuse from the banks of Rock Creek, installing open limestone channels, constructing a modified vertical flow system and applying limestone sand. As a result of this work populations of fish are improving and numbers and diversity of fish species are increasing. Due to these improvements, Rock Creek now provides partial support for aquatic life and swimming according to the 2002 *List of Impaired Waters for Kentucky* (KDOW 2002).

For details on this project see Tech Bulletin #3 at http://water.nr.state.ky.us/dow/pubs/Technical_Bulletin_Rock_Creek.pdf.

Funding in the amount of \$3.5 million is available for the 2005 grant year. These funds will be available for watershed restoration projects in streams that have a Total Maximum Daily Load and in First Priority 303(d) watersheds. This level of funding provides an opportunity to put substantial resources into watershed remediation projects that are results-oriented with goals and objectives focused on reducing nonpoint source pollution, improving water quality and meeting water quality standards.



The business of e-business grows

By David Nance

Department for Surface Mining Reclamation and Enforcement

With every passing year, businesses increase their demands that important documentation be easily obtained by the simple click of a mouse button. Several years ago, Gov. Paul Patton created the EMPOWER Kentucky Initiative, whereby state government was to become more efficient and effective by streamlining the delivery of services to Kentucky taxpayers. The cabinet's Department for Surface

Bickford, envisioned a mobile office that would enable cabinet inspectors and mine operators to sign paperless reports generated in the field. Today, that office is a reality. While on a mine site inspectors use laptop computers to create inspection reports and other documents utilized by the department.

The electronic workflow system is simply a sophisticated e-mail system. It

room. Electronically generated inspection and enforcement documents are filed in predetermined file structures according to their importance. Information concerning a specific permit can easily be recalled on a computer workstation at any regional office, as well as in Frankfort.

"The ability to store and communicate photographs, engineering analyses



LEFT: Cabinet inspector Jeff Benton writes a report on-site during a mining inspection. **CENTER:** Debbie Stone receives the report at the Prestonsburg Regional Office. **RIGHT:** Keith Smith reviews the report at the Department for Surface Mining Reclamation and Enforcement headquarters in Frankfort. This process takes only minutes, whereas before Benton would have had to deliver the hard copy report to the regional office in person, then it would have been sent via the U.S. Postal Service for delivery to Frankfort. Department for Surface Mining Reclamation and Enforcement photos

Mining Reclamation and Enforcement (DSMRE) was directed by this initiative to move toward a paperless office. During the last seven years, much of the work toward this goal has taken place—from scanning mine maps for easier accessibility of closed, abandoned or active mines to creating databases of abandoned mines that are available to citizens over the Internet—(see *Winter 2003 and Spring 2003 issues of Land, Air & Water*). Currently, several permit applications can also be submitted to the department on a CD-ROM or via the department's Web site.

Former cabinet secretary, James

moves the electronic documents from person to person via laptop and desktop computers. This process begins with the inspector "docking in" at the regional office and transmitting their reports into the regional field office's computer, and then the information is forwarded on to the central office in Frankfort in the same time interval as a simple e-mail message.

Presently three of the five regional offices have been brought online. The remaining offices are not far behind.

All of the reports completed by regional office personnel are placed into a document management system, which is an electronic version of a hard copy file

and enforcement documents has reduced the department's response times to citizens' complaints and increased efficiency in each of the divisions," said DSMRE Commissioner Carl Campbell.

This system represents a tremendous savings to the environment in that no hard copy paper versions of the document are created.

Inspectors have had to assimilate a great deal of computer knowledge. Many had never used a computer before the workflow system began. However, the field office staff has embraced the procedure and has become proficient with the equipment.



State, DOE sign cleanup agreement

Following negotiations that lasted for more than a week, Gov. Paul Patton signed a Letter of Intent (LOI) on Aug. 20 with the federal Department of Energy (DOE) outlining a commitment to accelerate environmental cleanup at the Paducah Gaseous Diffusion Plant.

"I believe that we have now achieved the progress necessary for the environmental cleanup of the Paducah Gaseous Diffusion Plant," said Patton.

By signing the LOI, the DOE agrees to begin cleanup on the highest-priority areas at the plant during what is to be the first of a two-phase-cleanup approach. Phase 1 is expected to be completed between 2010 to 2019.



DOE has also agreed to pay a \$1 million penalty for Notices of Violations issued by the state and spend \$200,000 for environmental improvements near the plant.

The state and DOE is expected to negotiate and sign an agreed order to completely resolve the enforcement and compliance issues.

Creative Services photo



Glass recycling is making a comeback

Continued from Page 1

Some benefits of using PGA for engineering applications include savings on transportation, gravel and landfill costs, as well as the satisfaction of demonstrating government leadership to promote resource conservation. Perhaps the best feature for recyclers is the eliminated need to separate the glass by its color, a common criticism of traditional glass recycling.

"This opportunity was a 'no-brainer' decision for us," said Pauline Allen, solid waste coordinator for Henderson, Union and Webster counties. "Our Tri-County Recycling Corporation was able to beneficially reuse 12 tons of container glass for a road-widening project in Henderson and a culvert emplacement in Union. We estimate that the two counties avoided more than \$1,200 in expenses, while diverting a lot of material that would have ended up in the local landfill."

Rowan County took a different approach with its first PGA project. The Morehead-Rowan County-MSU Community Recycling Center, an equal partnership involving the city of Morehead, Rowan County and Morehead State University, used PGA to create a concrete pad for a recycling station on Morehead's campus. A university maintenance crew mixed the glass aggregate one-to-one with wet concrete. The resulting concrete pad included more than 800 pounds of pulverized glass.

"We're very interested in finding ways to incorporate recycled glass into various county projects," said Rowan County Deputy Judge-Executive Tim Gibbs. "We currently have several tons of PGA at the county garage that we plan to use in upcoming road projects."

The Federal Environmental Protection Agency estimates that Kentuckians generate about 100,000 tons of container glass each year. Increased collection and reuse of this material will greatly add to waste reduction results in the Commonwealth.

For engineering data and information regarding other states' use of PGA, contact Tom Heil at (502) 564-6716 or e-mail him at Thomas.Heil@mail.state.ky.us.



History in the wild *Continued from Page 6*

One insect you won't find reproducing in a wetland is the mosquito. Although many people associate shallow, nonmoving water as a breeding ground for mosquitoes, that is not the case with wetlands. Because of the abundant population of bats, dragonfly, salamander and other predatory insects, mosquitoes are unable to live long enough to reproduce.

Plants, however, are another story. On the surface of a restored wetland floats one of the rarest plants in the Daniel Boone National Forest—the fragrant waterlily. Although the exact origin of the lily is not known, Biebighauser believes that a seed traveled by way of a duck or heron as it migrated through the state. The potential for unusual plant life is extraordinary.

This is not first time that PRIDE money has been used to restore wetlands. Two years ago, SEEC also received a community grant to launch a wetlands restoration campaign in the Clear Fork Creek area of Rowan County.

With the leftover grant money from 2003, SEEC plans to purchase waterproof waders so that youngsters and adults can get "waist deep" during their field trips to the wetlands. The U.S. Forest Service has led more than 300 students on field trips into the restored wetlands of the Daniel Boone National Forest. Many Kentucky teachers are also working with volunteers to build vernal ponds as outdoor classrooms on school property.

People interested in seeing a wetland (without getting their feet wet) can visit the Daniel Boone National Forest's Shallow Flats wildlife and viewing area on Highway 801 in Rowan County. The U.S. Forest Service restored this particular area in 1977 to bring the Canada goose back to the area.

If you are interested in constructing your own wetland, you may request a copy of Biebighauser's book, *A Guide to Creating Vernal Ponds*, by e-mailing him at tombiebighauser@fd.fed.us or download a copy from the U.S. Forest Service's Web page at <http://www.southernregion.fs.fed.us/boone/vernal.pdf>

Eastern Kentucky PRIDE's community grants are awarded yearly. To learn more about PRIDE, visit their Web site at <http://www.kypride.org>.



The spirit of Gato del Sol “rayces” on

By Julie Smither
Division of Energy

Twenty-three-year-old Ben Macke summed it up: “Solar, wind and hydroelectric power are all environmentally sound fuels that start with the sun. It seems only natural that we use the source of all life on this planet as a fuel source as well.”

Ben is a member of the University of Kentucky (UK) team that constructed Gato del Sol, the university’s first solar car. Gato del Sol, or Cat of the Sun, was named after the 1982 Derby winner from Paris, Ky. The team was organized in 1999 by mechanical engineering student Bianca McCartt, and the car was completed in time to enter July’s American Solar Challenge, the longest solar “rayce” in the world.

Sadly, Gato del Sol never made it past the 140 miles of qualifying laps. It was one of the 10 entries that did not qualify from a field of 30. The weather was cloudy, and Gato del Sol carried 100 pounds more than most in its class.



“We received a lot of positive feedback about the car from other teams and the race officials and should be encouraged that we have a very good, robust car that will compete next year and possibly for many years to come,” said McCartt. “Expect to see us race next May in the Formula Sun Grand Prix and try the American Solar Challenge again in 2005.”

However, the spirit of Gato del Sol lived on through Cal Sol, the solar car from the University of California, Berkeley. On the starting line, Cal Sol burned out its motor controller, harming the car’s motor. Without a spare motor, Berkeley was out of the race.

Enter Gato del Sol. The University of Kentucky team offered the use of Gato del Sol’s motor and controller. Cal Sol, now with the spirit of a Kentucky thoroughbred and a UK sticker on its front, pulled away.

“It was an exciting moment, watching the blue California solar car come to life, take a ‘victory’ (test) lap, and pull out into Chicago traffic,” said Karen Robb, “the white University of Kentucky sticker sparkling on its new location under the life-

giving sun.” Robb is a member of the team and a biosystems and agricultural engineering junior.

Not ready to go home, five members of the UK team followed the race from Chicago to California—down old Route 66, across the Great Plains, through the Rocky Mountains, and over the Great American Desert to the finish line in southern California.

“We received a lot of positive feedback about the car from other teams and the race officials and should be encouraged that we have a very good, robust car that will compete next year and possibly for many years to come,” said McCartt. “Expect to see us race next May in the Formula Sun Grand Prix and try the American Solar Challenge again in 2005.”

For more information on UK’s Gato del Sol, see <http://www.engr.uky.edu/solarcar/index2.htm>. To learn more about harnessing the power of the sun, see the Kentucky Division of Energy’s Web site at <http://www.energy.ky.gov>.



TOP: The UK blue solar Gato del Sol with student team members.

LEFT: The Gato del Sol team with its Derby-winning namesake at Stone Farm in Paris, Ky. Back row, left to right: Advisor Dr. Scott Stephens, B.J. Hinkle, Chris Morgan, Bianca McCartt, groom with Gato del Sol, Matt Dieruf, Justin Brown, Merritt Johnson, Karen Robb and Aydin Hatemi. Front row, left to right: Colin Goggin, Kirk Stechschulte, Christy Trinkle, Kirk Fallis and Autumn Foushee.

Photos provided by the University of Kentucky



Agency tours slurry spill site

By Leslie Cole
Environmental Quality Commission

On Oct. 11, 2000, a coal slurry impoundment at the Martin County Coal Corp. near Inez, Ky., breached into an underground mine, resulting in one of the largest environmental slurry spills ever in Kentucky and the southeastern United States.

Three years later, the Environmental Quality Commission (EQC) held a public forum to receive a status report and tour the spill site.



ABOVE: The state's enforcement actions against Martin County Coal have been resolved, resulting in the closure and ongoing reclamation of the 72-acre impoundment. Coal refuse is being placed over solidified slurry as part of the reclamation process.

RIGHT: Martin County Coal Corp. hosted a tour of the failed impoundment and impacted area for EQC commissioners.
EQC photos



Life returning to waterways

"The full extent of the Martin County slurry spill is not yet known," said Tom Welborn of the U.S. Environmental Protection Agency (EPA) Region 4.

An estimated 245 million gallons of coal refuse slurry was released into the tributaries of the Big Sandy River, visibly contaminating waterways as far downstream as the Ohio River. Another 66 million gallons of slurry remain trapped in the underground mine.

Varying amounts of slurry remain in the stream system, and it is unlikely that all of it will be removed. However, some 15 species of fish have returned to Coldwater and Wolf creeks, and crayfish and insects have rebounded indicating improving water quality. Levels of heavy metals such as lead, cadmium, mercury, zinc, chromium, copper and arsenic were elevated during the first two weeks of the spill but have declined to levels consistent with surface waters in this area. "While the ecological system is improving, we still have a long way to go to restore the watershed," said Bob Logan, commissioner of the Kentucky Department for Environmental Protection.

Cleanup to take five years

To date, the cost of the slurry spill cleanup is \$58 million, accord-

ing to Martin County Coal Corp. In August 2002 the company also paid \$3.25 million in penalties and damages to Kentucky. The state's enforcement actions against Martin County Coal also require the restoration of the polluted waterways and the closure and reclamation of the 72-acre failed impoundment.

Thirty slurry cells, ranging in size from four to 103 acres, are now being used at the Martin County operation to treat processed coal waste.

The first phase of cleanup, covering 15 miles of streams and land along Coldwater and Wolf creeks, was completed in May, and a second 90-mile phase of cleanup will take another three to five years, according to the restoration plan.

Oversight at impoundments strengthened

In response to the spill, the state conducted a review of 118 coal waste impoundments. State surface mining engineers and inspectors must now also perform additional inspections and permit reviews of coal waste impoundments. A state "Mine Mapping Initiative" is also underway to provide the public with greater access to historical and active underground coal maps.

Public concerns expressed

Residents from the area who attended the EQC forum expressed concern regarding the elevated levels of contaminants in the water, as well as the lack of public information and input on cleanup activities. In response, EQC recommended that the public be given a more meaningful role in the cleanup process. Recommendations to the EPA included that a public advisory committee be established and funded to allow for citizen input on the restoration plan and cleanup activities. Visit the EQC Web site to view the EQC recommendations and additional photos of the spill and cleanup progress at www.kyeqc.net.



Teachers “energized” by workshop

By Julie Smither
Division of Energy

In July, 24 teachers spent five days touring energy sites in western Kentucky as part of the 2003 Kentucky Energy Conference for Educators.

Among the stops were the Paradise power plant, Paducah Gaseous Diffusion plant, Lake Barkley hydroelectric power plant and the Dotiki underground mine.

Teachers learned about a managed mine reclamation site from biologists with the Kentucky Department of Fish and Wildlife Resources. All aspects of energy, including the science of energy, sources of energy, consumption, electricity, efficiency, and environmental and economic impacts were studied.

The conference, which last year allowed teachers to tour energy-related facilities in eastern Kentucky, was coordinated by the Kentucky NEED (National

Teachers at the NEED conference visited the Hopkins County coal volunteer surface mine.

Photo by
Pam Procter, NEED



Energy Education Development) Project, a nonprofit organization that focuses on teaching students and teachers about energy. Conference participants received instruction and materials to implement innovative hands-on energy units in their classrooms.

Graduate credit from Northern Kentucky University was available for teachers selected to attend this year's conference. Teachers represented Boone, Boyd, Campbell, Hopkins, Jessamine,

Kenton, Marshall, Muhlenberg, Nicholas and Pendleton counties.

For information on next year's conference or to learn more about NEED in Kentucky, contact Karen Reagor at (866) 736-8941. Also visit the NEED Web site at <http://www.need.org>. For more energy education information, visit the Kentucky Division of Energy Web site at <http://www.energy.ky.gov>.



Tonic for an ailing environment

Continued from Page 13

help combat illegal dumping, and to finance the closure of old landfills across the state. The RCLA Branch is currently ranking illegal dumps based on their threat to human health and the environment, and will use a portion of the revenue generated from the tipping fee to reimburse counties for dump cleanups.

“In the first quarter since the new law's inception, the solid waste tipping fee has generated more than \$2.3 million,” said Rob Daniell, DWM director. “This funding provides a good start for addressing the top priority inactive landfills across the state that pose a threat to human health and the environment.”

To date, the DWM Solid Waste Branch has identified 647 inactive landfills across the state, including formerly permitted facilities and abandoned disposal sites, requiring thorough examination and potential repairs such as clay soil cap to cover exposed waste. The Department for Environmental Protection (DEP) reorganized the Solid Waste Branch of the DWM to accommodate a Landfill Closure Section to address such environmental issues.

“Our new Closure Section is busy evaluating site-specific data for each of these 647 former disposal facilities through file reviews and field inspections,” said Solid Waste Branch

Manager Ron Gruzesky. “They're using environmental criteria to prioritize and rank the threats to human health, safety and the environment, like exposed waste, leachate outbreaks, surface and groundwater contamination, proximity to local sites of interest and potential for domestic water use.”

The DEP has prioritized eight particular sites for immediate action and given ranking to another 55 sites. However, the remaining 584 sites require more detailed evaluation according to the report. Continued evaluation and investigative sampling may also drive the need to adjust the current ranking.

Historic and abandoned landfill closures are an expensive endeavor for taxpayers. The new law includes a provision to assist the cabinet with a third source of funding via a \$25 million bond sale. The cabinet would have initiated the bond sale in January of this year as prescribed in the statute, but the 2002 Kentucky General Assembly's inability to compromise on a budget delayed the issuance until a budget agreement was reached. The DWM now expects the bond to be issued this fall so that cleanup work can begin at the eight priority landfills.

In the meantime, the NREPC sees a more positive outcome for Kentucky's solid waste problems than in recent years. “The DWM is on course to meet the objectives outlined in HB 174,” said Daniell. “Funding has always been the key to success.”



Conferences & Awards

Candidates, district members discuss agriculture's future

By Martin Bess
Division of Conservation

The major issue facing conservation districts today is meeting the needs of expanding roles and responsibilities. State and local conservation districts are feeling the pressure as they try to assist the needs of farmers, since so many state and federally funded programs have been cut.

That's one of the reasons why more than 500 people turned out for the 60th annual Kentucky Association of Conservation Districts (KACD) convention in July.

The KACD holds this conference to keep its members and other attendees up to date on environmental issues, federal and state programs and new technologies available to deal with the future of conservation.

Conference participants heard discussions on the 2002 federal farm bill, the Purchase Agriculture Conservation Easements (PACE) program, Homeland Security and agriculture (as it relates to terrorism) and chronic wasting disease in Kentucky. They also were updated on the Kentucky Landscape Snapshot project, which will develop a digital snapshot of the Commonwealth's natural and man-made landscape as it is now, compared to how it was used in the past and how it can be used in the future.

As an added bonus, gubernatorial candidates Democrat Ben Chandler and Republican U.S. Rep. Ernie Fletcher spoke to the group concerning their campaign platform on soil and water conservation, tobacco settlement programs, environmental issues and the importance of agriculture to Kentucky.

During the convention, awards were also presented to Kentuckians that showed outstanding leadership in conservation programs and practices.



Gubernatorial candidates Ernie Fletcher (left) and Ben Chandler (right) addressed conference attendees on environmental and agricultural issues.

BELOW: Billy Ray Smith is presented the Conservation Person of the Year Award by KACD President Patrick Henderson.
Division of Conservation photos



2003 Conservation Person of the Year—Kentucky Department of Agriculture Commissioner Billy Ray Smith was selected for his long-term support of Kentucky's conservation district programs. His efforts in the Kentucky General Assembly enhanced the passage of the Agriculture Water Quality Act, and his department provided millions to the Kentucky Division of Conservation to support the Kentucky Soil Erosion and Water Quality Cost Share Program.

Distinguished Service Award—Robert Toole for providing quality staff assistance and advice to Kentucky's state association and to its national representatives, as well as his friendship to Kentucky's 121 local conservation districts over the many years.

2003 Outstanding Conservation Cooperator Award (state winner)—Greg and Donna Williams, Taylor County (awarded \$500); state runner-up—Greg and Joan Ritter, Barren County (awarded \$250).

Environmental Education Award—Taylor County Conservation District.

Outstanding Junior Board Awards—Taylor County Junior Board and Scott County Junior Board.

Elementary Conservation Teacher Award—Lisa Riggs, Campbellsville Elementary, Taylor County.

Outstanding Conservation Districts—Warren County (western Kentucky) and Mercer County (eastern Kentucky).

Forestry Award—Taylor County and Green County conservation districts and the South Central District Office of the Kentucky Division of Forestry.

Soil Stewardship Award—Fleming County Conservation District.

KACD Auxiliary Natural Resource Scholarship—Kathryn Renee Ellis, Fayette County.

KACD Auxiliary George Crafton Scholarship—Kelli Quisenberry, Anderson County.

KACD Auxiliary Natural Resource Nontraditional Scholarship—Janet Meyer, Madison County.

Kentucky Envirothon—Fayette County 4-H Environmental Club.



Kentucky River banks receive a spring cleaning

By Cindy Schafer
Office of the Secretary

There were no mops, buckets and cleaning supplies on hand, but there were plenty of garbage bags and rubber gloves distributed for the 2003 Kentucky River Sweep spring-cleaning event. The 'sweep' has become an annual opportunity for people to gather along the banks of the Kentucky River near Ft. Boonesborough Beach to rid the area of unsightly trash.

Bob Rasmusson, Madison County's solid waste coordinator, pulled the function together again this year with volunteers that were eager to pick up trash that had accumulated along the river. "The health of the river depends on not having this offensive stuff in it," he said.

The offensive items Rasmusson refers to are plastic bottles, cans, waste tires, diapers and even a treadmill. In all, 365 bags of trash (totaling 6 tons) were picked up along more than 43 miles of shoreline.

Approximately 316 volunteers showed up for the event, and they were duly rewarded for their hard work with a cookout after spending a long day cleaning up the area.



Cleanup volunteers received garbage bags, rubber gloves and T-shirts before they hit the sand looking for discarded trash and other items dumped along the banks of the Kentucky River. Photo provided by Bob Rasmusson

Thanks to their efforts, and to Rasmusson for coordinating the event, the banks along Ft. Boonesborough Beach are clean once again. "Everyone is already excited about coming back next year," said Rasmusson.



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